

Translation of PCT/EP00/08085:

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Axial piston drive with a continuously adjustable piston stroke

Abstract

5 The invention is based on an axial piston drive with a continuously adjustable piston stroke, which comprises a drive shaft (10, 12, 170) and a swash plate (16, 18) mounted on a bearing seat (14) that is positioned at a first tilt angle (22) with respect to the longitudinal direction (20) and on which the swash plate (16, 18, 174) is supported within a crank chamber (24), with a bore of bearing (30) that is tilted by a second tilt angle (28) with respect to the perpendicular line of the swash plate (16, 18, 174), and in order to adjust the 15 piston stroke the swash plate (16, 18, 174) can be rotated through a range of angles by means of a controller (32, 34), and also comprises at least one piston (44, 46, 48, 50) movably disposed in a cylinder (36, 38, 40, 42) and connected to the swash plate (16, 18, 174) so as to be driven thereby.

20 It is proposed that onto the rotational movement from a maximal resulting tilt angle (52) to the minimal resulting tilt angle (54) there is superimposed an axial stroke movement (56) of the swash plate (16, 18, 174) in the direction towards the piston (44, 46, 48, 50), and onto the rotational movement from the 25 minimal resulting tilt angle (54) to the maximal resulting tilt angle (52) there is superimposed an axial stroke movement (116) of the swash plate in the direction away from the piston (44, 46, 48, 50).

(Fig. 2)